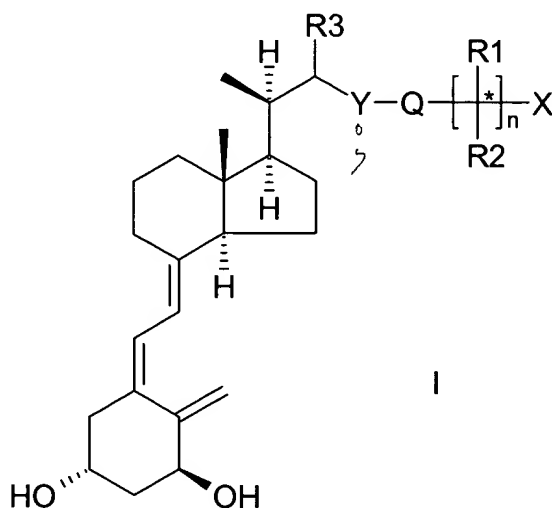


AMENDMENTS TO THE CLAIMS

1. (Currently Amended) The use A method for the treatment and prophylaxis of osteoporosis and related bone conditions comprising administering to a patient in need thereof an effective amount of a compound of the formula I



A² wherein

X represents hydrogen or hydroxy;

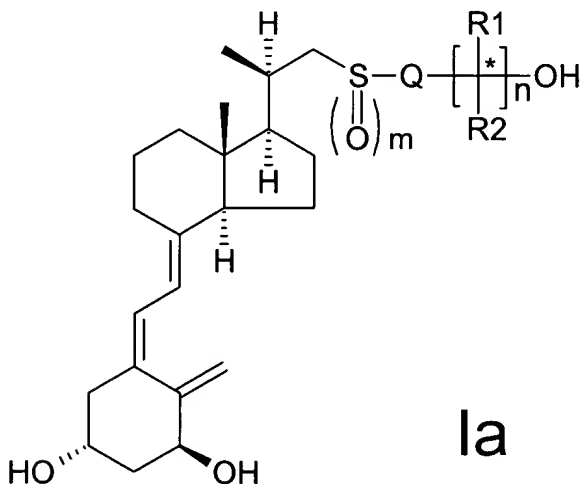
Y represents oxygen or sulphur or oxidized sulphur selected from the groups S(O) and S(O₂);

R¹ and R², which may be the same or different, represent hydrogen or a residue after removal of 1 hydrogen atom from a straight, branched or cyclic, saturated or unsaturated, C₁-C₆-hydrocarbon; or R¹ and R², together with the carbon atom to which they are attached (marked with an asterisk in formula I), bearing the group X, form a C₃-C₈ carbocyclic ring;

Q represents a diradical residue after removal of 2 hydrogen atoms from a straight, branched or cyclic, saturated or unsaturated C₁-C₈-hydrocarbon;

R³ represents hydrogen or a residue after removal of 1 hydrogen

atom from a straight, branched or cyclic, saturated or unsaturated C₁-C₆-hydrocarbon;
R¹, R² and/or Q is optionally substituted with one or more deuterium or fluorine atoms; and
n is 0 or 1;
and derivatives of the compounds of formula I in which one or more hydroxy groups have been transformed into -O-acyl or -O-glycosyl groups, or a phosphate ester, such masked groups being hydrolyzable in vivo; or
~~for the preparation of a medicament for the treatment and/or prophylaxis of osteoporosis and related bone disorders~~
administering to a patient in need thereof an effective amount of a compound of formula Ia



wherein R¹, R², and Q have the meanings specified above; m=0, 1 or 2; and n=1.

2. (Currently Amended) ~~Use of a compound of formula~~
The method according to claim 1, wherein Y represents sulphur or
oxidized sulphur selected from the groups S(O) or S(O₂) ~~for the~~
~~preparation of a medicament for the treatment and/or prophylaxis~~
~~of osteoporosis and related bone disorders.~~

3. (Currently Amended) ~~Use of a compound of formula I~~ The
method according to claim 1, wherein R¹ and R², together with the
carbon atom to which they are attached (marked with an asterisk
in formula I), bearing the group X, form a C₃-C₅ alkylene group
or a C₃-C₅ carbocyclic ring, ~~said ring preferably being saturated~~
~~for the preparation of a medicament for the treatment and/or~~
~~prophylaxis of osteoporosis and related bone disorders.~~

A²
cont'd
4. (Currently Amended) ~~Use of a compound of formula I~~
The method according to claim 1, wherein Q represents a
phenylene group optionally substituted with one or more fluorine
atoms ~~for the preparation of a medicament for the treatment~~
~~and/or prophylaxis of osteoporosis and related bone disorders.~~

5. (Currently Amended) ~~Use of a compound of formula I~~
The method according to claim 1, wherein R³ represents hydrogen
~~for the preparation of a medicament for the treatment and/or~~
~~prophylaxis of osteoporosis and related bone disorders.~~

6. (Currently Amended) ~~Use of a compound of formula I~~
The method according to claim 1, wherein n is 1 ~~for the~~
~~preparation of a medicament for the treatment and/or prophylaxis~~

~~of osteoporosis and related bone disorders.~~

7. (Canceled)

8. (Currently Amended) ~~Use of a~~ The method according to claim 1, wherein the compound according to formula I as defined in claims 1 to 7 is selected from the group consisting of:

1(S),3(R)-Dihydroxy-20(R)-(3-hydroxy-3-methyl-1-butoxymethyl)-9,10-seco-pregna-5(Z),7(E),10(19)-triene (Compound 102),

1(S),3(R)-Dihydroxy-20(R)-(3-hydroxy-3-ethyl-1-pentyloxymethyl)-9,10-seco-pregna-5(Z),7(E),10(19)-triene (Compound 103),

1(S),3(R)-Dihydroxy-20(R)-(4-hydroxy-4-methyl-1-pentyloxymethyl)-9,10-seco-pregna-(Z),7(E),10(19)-triene (Compound 106),

1(S),3(R)-Dihydroxy-20(R)-(4-hydroxy-4-methyl-1-pent-2(E)-enyloxymethyl)-9,10-seco-pregna-5(Z),7(E),10(19)-triene (Compound 107)

1(S),3(R)-Dihydroxy-20(R)-(4-hydroxy-4-methyl-1-pent-2-ynyloxymethyl)-9,10-seco-pregna-5(Z),7(E),10(19)-triene (Compound 108),

1(S),3(R)-Dihydroxy-20(R)-(4-hydroxy-4-trifluoromethyl-5,5,5-trifluoro-1-pent-2-ynyloxymethyl)-9,10-seco-pregna-5(Z),7(E),10(19)-triene (Compound 109),

1(S),3(R)-Dihydroxy-20(R)-[3-(2-hydroxy-2-propyl)-phenoxyethyl]-9,10-seco-pregna-5(Z),7(E),10(19)-triene (Compound 111),

1(S), 3(R) -Dihydroxy-20(R) - (2-hydroxy-2-methyl-1-propylthio-
methyl) -9,10-seco-pregna-5(Z), 7(E), 10(19) -triene (Compound 116),
1(S), 3(R) -Dihydroxy-20(R) - (3-hydroxy-3-methyl-1-butylthiomethyl) -
-9,10-seco-pregna-5(Z), 7(E), 10(19) -triene (Compound 117),
1(S), 3(R) -Dihydroxy-20(R) - (3-hydroxy-3-ethyl-1-pentylthiomethyl) -
-9,10-seco-pregna-5(Z), 7(E), 10(19) -triene (Compound 121),
1(S), 3(R) -Dihydroxy-20(R) - (5-hydroxy-5-methyl-1-hexyloxymethyl) -
-9,10-seco-pregna-5(Z), 7(E), 10(19) -triene (Compound 126),
1(S), 3(R) -Dihydroxy-20(R) - [2 - (2-hydroxy-2-propyl) -phenoxy
methyl] -9,10-seco-pregna-5(Z), 7(E), 10(19) -triene (Compound 127),
1(S), 3(R) -Dihydroxy-20(R) - [2 - (3-hydroxy-3-pentyl) -phenoxy-
methyl] -9,10-seco-pregna-5(Z), 7(E), 10(19) -triene (Compound 128),
1(S), 3(R) -Dihydroxy-20(R) - [3 - (3-hydroxy-3-pentyl) -phenoxy-
methyl] -9,10-seco-pregna-5(Z), 7(E), 10(19) -triene (Compound 129),
1(S), 3(R) -Dihydroxy-20(R) - [4 - (2-hydroxy-2-propyl) -phenoxy-
methyl] -9,10-seco-pregna-5(Z), 7(E), 10(19) -triene (Compound 130),
1(S), 3(R) -Dihydroxy-20(R) - [4 - (3-hydroxy-3-pentyl) -phenoxy-
methyl] -9,10-seco-pregna-5(Z), 7(E), 10(19) -triene (Compound 131),
1(S), 3(R) -Dihydroxy-20(R) - [3 - (hydroxymethyl) -phenoxy-methyl] -
-9,10-seco-pregna-5(Z), 7(E), 10(19) -triene (Compound 132),
1(S), 3(R) -Dihydroxy-20(R) - (3-hydroxy-3-ethyl-1-pentylsulphinylme
thyl) -9,10-seco-pregna-5(Z), 7(E), 10(19) -triene (Compound 133),
1(S), 3(R) -Dihydroxy-20(R) - (3-hydroxy-3-ethyl-1-pentylsulphinylme
thyl) -9,10-seco-pregna-5(Z), 7(E), 10(19) -triene (Compound 134),
1(S), 3(R) -Dihydroxy-20(R) - (3-hydroxy-3-ethyl-1-pentylsulphonylme
thyl) -9,10-seco-pregna-5(Z), 7(E), -10(19) -triene (Compound 135),

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1(S),3(R)-Dihydroxy-20(R)-(4-hydroxy-4-methyl-1-pentylthio-
methyl)-9,10-seco-pregna-5(Z),7(E),10(19)-triene (Compound 136),
1(S),3(R)-Dihydroxy-20(R)-(3-(hydroxymethyl)phenylthiomethyl)-9,
10-seco-pregna-5(Z),7(E),10(19)-triene (Compound 137),
1(S),3(R)-Dihydroxy-20(R)-(3-((1-hydroxy-1-methyl)ethyl)phenylth
iomethyl)-9,10-seco-pregna-5(Z),7(E),-10(19)-triene (Compound
138),
(S),3(R)-Dihydroxy-20(R)-(4-hydroxy-4-ethyl-1-hex-2-ynyloxymethy
l)-9,10-seco-pregna-5(Z),7(E),10(19)-triene (Compound 139),
1(S),3(R)-Dihydroxy-20(R)-(2-hydroxyphenoxyethyl)-9,10-seco-pre
gna-5(Z),7(E),10(19)-triene Compound 140),
1(S),3(R)-Dihydroxy-20(R)-(3-hydroxyphenoxyethyl)-9,10-seco-
pregna-5(Z),7(E),10(19)-triene (Compound 141),
1(S),3(R)-Dihydroxy-20(R)-(2-((1-hydroxy-1-
methyl)ethyl)phenylthiomethyl)-9,10-seco-pregna-
5(Z),7(E),10(19)-triene (Compound 142),
1(S),3(R)-Dihydroxy-20(R)-(3-((1-hydroxy-1-
ethyl)propyl)phenylthiomethyl)-9,10-seco-pregna-
5(Z),7(E),10(19)-triene (Compound 144),
1(S),3(R)-Dihydroxy-20(R)-(4-((1-hydroxy-1-
methyl)ethyl)phenylthiomethyl)-9,10-seco-pregna-
5(Z),7(E),10(19)-triene (Compound 145),
1(S),3(R)-Dihydroxy-20(R)-(2-hydroxy)phenylthiomethyl)-9,10-
seco-pregna-5(Z),7(E),10(19)-triene (Compound 147),
1(S),3(R)-Dihydroxy-20(R)-(3,3-difluoro-4-hydroxy-4-methyl-1-pen
tyloxymethyl)-9,10-seco-pregna-5(Z),-7(E),10(19)-triene
(Compound 153),
1(S),3(R)-Dihydroxy-20(R)-(4-(hydroxymethyl)phenylthiomethyl)-
9,10-seco-pregna-5(Z),7(E),10(19)-triene, (Compound 163),

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1(S),3(R)-Dihydroxy-20(R)-(4--((1-hydroxy-1-ethyl)propyl))phenylthiomethyl)-9,10-seco-pregna-5(Z),7(E),10(19)-triene, (Compound 164),
1(S),3(R)-Dihydroxy-20(R)-(4--((1-hydroxy-1-methyl)ethyl))phenylthiomethyl)-22(R)-methyl-9,10-seco-pregna-5(Z),7(E),10(19)-triene, (Compound 165), and
1(S),3(R)-Dihydroxy-20(R)-(4--((1-hydroxy-1-methyl)ethyl))phenylthiomethyl)-22(S)-methyl-9,10-seco-pregna-5(Z),7(E),10(19)-triene, (Compound 166), for the preparation of a medicament for the treatment and/or prophylaxis of osteoporosis and related bone disorders.

9. (Canceled)

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10. (Currently Amended) A The method according to claim 1, wherein a compound according to formula Ia is administered and ~~the preceding claim~~ wherein Q represents an unsubstituted phenylene group.

11. (Currently Amended) A The method according to claim 1, wherein a compound of formula Ia is administered and is selected from the group consisting of:
1(S),3(R)-Dihydroxy-20(R)-(4-hydroxy-phenylthiomethyl)-9,10-seco-pregna-5(Z),7(E),10(19)-triene (Compound 149),
1(S),3(R)-Dihydroxy-20(R)-(3,3-difluoro-4-hydroxy-4-methyl-1-pentylthiomethyl)-9,10-seco-pregna-5(Z),7(E),10(19)-triene (Compound 155),

1(S),3(R)-Dihydroxy-20(R)-(3,3-difluoro-4-hydroxy-4-methyl-1-pentylsulphinylmethyl)-9,10-seco-pregna-5(Z),7(E),10(19)-triene (Compound 156),

1(S),3(R)-Dihydroxy-20(R)-(3-((1-hydroxy-1-methyl)ethyl)phenylsulphinylmethyl)-9,10-seco-pregna-5(Z),7(E),10(19)-triene (Compound 157),

~~1(S),3(R)-Dihydroxy-20(R)-(3-((1-hydroxy-1-methyl)ethyl)phenylsulphonylmethyl)-9,10-seco-pregna-5(Z),7(E),10(19)-triene (Compound 158),~~

1(S),3(R)-Dihydroxy-20(R)-(3-((1-hydroxy-1-methyl)ethyl)phenylsulphinylmethyl)-9,10-seco-pregna-5(Z),7(E),10(19)-triene (Compound 159),

1(S),3(R)-Dihydroxy-20(R)-(4-((1-hydroxy-1-methyl)ethyl)phenylsulphonylmethyl)-9,10-seco-pregna-5(Z),7(E),10(19)-triene (Compound 160),

~~1(S),3(R)-Dihydroxy-20(R)-(4-((1-hydroxy-1-methyl)ethyl)phenylsulphinylmethyl)-9,10-seco-pregna-5(Z),7(E),10(19)-triene (Compound 161), and~~

1(S),3(R)-Dihydroxy-20(R)-(4-((1-hydroxy-1-methyl)ethyl)phenylsulphinylmethyl)-9,10-seco-pregna-5(Z),7(E),10(19)-triene (Compound 162).

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12. (Currently Amended) ~~A pharmaceutical composition containing an effective amount of one or more of the compounds of claim 9, 10 or 11,~~ The method according to claim 1, wherein the compound is administered together with pharmaceutically acceptable, non-toxic carriers and/or auxiliary agents.

13. (Currently Amended) ~~A pharmaceutical composition~~ The method according to claim 12, wherein the compound is in dosage unit form.

14. (Currently Amended) ~~A dosage unit~~ The method according to claim 13, wherein the dosage unit form contains ~~containing~~ from about 0.5 μ g - about 6 mg ~~preferably from about 6 μ g to about 3 mg~~ of a compound of formula I or Ia.

A2
cont'd
15. (Currently Amended) A method for the treatment and prophylaxis of osteoporosis and related bone conditions comprising administering to a patient in need thereof an effective amount of a compound of formula ~~I~~ or Ia.

16. - 20. (Canceled)

21. (New) A method for the treatment and prophylaxis of osteoporosis and related bone conditions comprising administering to a patient in need thereof an effective amount of a compound of formula I.

22. (New) The method according to claim 13, wherein the dosage unit form contains containing from about 0.5 μ g - about 6 mg of a compound of formula I or Ia.

23. (New) The method according to claim 3, wherein said C_3 - C_5 carboxylic ring is saturated.
